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ABSTRACT

In a study of the influence of parents' expectations and short-term goals on their choice of activities and their children's achievement, a total of 180 parents of students in grades two through six were surveyed. The sample population of students was 13 percent Asian-American, 12 percent African-American, 19 percent Latino, 51 percent Anglo, with 36 percent bussed from inner-city areas. Data were collected from parent surveys and Metropolitan Achievement Test (MAT 6) reading and math pre- and posttest scores. Findings showed that substantial differences in achievement were related to parental expectations, goals, activities, and school involvement. Parent-controlled activities were negatively related to achievement and achievement gains, and parent conference attendance was significantly related to achievement. Parent goals emerged as strong predictors of achievement gains, especially in the analysis of female, minority, and lower income students' data. A sample parent survey is appended. (MM)

Parent Involvement: Relationships of Expectations, Goals, and Activities to Student Achievement Among Minority, Socioeconomic, and Gender Groups

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Running head: PARENT INVOLVEMENT AND ACHIEVEMENT

Abstract

Relationships among student achievement and parental expectations, goals, education and socialization activities, and formal school involvement were investigated. The sample population (N=180) of elementary school children was 13% Asian-American, 12% African-American, 19% Latino, 51% Anglo, and 4% other, with 36% bussed from inner city areas. Data were gathered from parent surveys, and Metropolitan Achievement Test (MAT 6) reading and math pre-and post test scores. Statistical analyses included: a) Pearson's r correlations and chi-square tests; b) multiple regression analyses in which achievement gain residuals were the dependent variables; and c) path-analysis. Findings included a relationship between expectations and total achievement in reading ($r=.26$, $p<.001$), math ($r=.32$, $p<.001$), and to achievement gain on one subtest. Achievement, but not achievement gain, was strongly related to parent conference attendance (chi-square = 19.52, $p<.001$) and parent volunteerism (chi-square = 6.25, $p<.05$.) Some parent-directed activities were negatively related to achievement and gains, primarily in reading. Many significant relationships among variables, differences in the relationships for groups of students, and implications are discussed.

Parent Involvement: Relationships of Expectations, Goals, and Activities to Student Achievement Among Minority, Socioeconomic, and Gender Groups

How can parents influence their children's achievement in school? A diverse literature points to many avenues of parental influence. In deciding where to place their efforts, parents need a more cohesive body of information. The goal of this study is to explore the relationships and relative contributions of various types of parent involvement to student achievement.

The knowledge and insight research could provide in this area have great potential for all concerned: the policy makers who call for and mandate parent involvement; the administrators who plan and provide parent activities; the teachers and other school personnel who advise parents; the parents, who care, and look to educators for guidance, but find their time and resources limited; and ultimately, the children who must develop and learn within the structures set forth by so many adults. All could benefit from research which aids in prioritizing the many possible types of parent involvement, and in providing what will benefit parents and children most.

Background Literature

Literature relating parent involvement to student achievement was found in three main areas: (a) education at home, both direct and indirect; (b) socialization, including discipline, parental aspirations and beliefs, and cultural influences; and (c) formal parent-school involvement.

Education

Both direct and indirect educational practices have been studied. Direct practices included teaching, and tutoring, as well as supervising school-related tasks. Indirect practices included providing experiences, materials, and opportunities for learning.

Direct Education. Research on direct educational practices has not been conclusive. Positive, non-significant, and negative results have been reported. Leler (1983) reviewed studies of programs in which parents were trained to tutor their elementary school children. Most of the programs focused on reading for primary grade students. Significant differences were found on reading achievement measures in six of the twelve studies. No significant differences in achievement were found in six other studies, although many of the programs involved extensive training, supervision, and in-

home follow up. Olmstead and Rubin (1982) reviewed evaluations of Parent Education Follow Through Programs, which included education of parents regarding practices termed desirable teaching behaviors. A significant relationship between the behaviors and student achievement was indicated for only one of several groups studied.

Ronnell (1984) and Calahan (1987) each reported significant achievement results when parents were involved in home programs in a supervisory capacity.

Lee (1984) reported that parental assistance with reading skills was found to be inversely related to reading achievement. Scott-Jones (1987) reported related findings, from observations of parental behavior of low-income black first grade children. She found that teaching, school-related activities, and conversations tended to be directly controlled by the mothers of low-readiness children.

Indirect Education. In some of the same studies, selected indirect practices were found to be positively related to achievement. Lee found significant differences between the parents of average and high reading achievers in modeling reading behavior and in language interaction. McGowan and Johnson's (1984) research with Mexican-American preschool

children indicated that early intellectual stimulation, and the quality of the home environment, contributed to their children's success. Olmstead and Rubin (1982) showed that language stimulation was significantly related to student achievement in reading and math. Scott-Jones (1987) found that high-readiness children were often involved in the selection of activities, self-initiated questions and statements, play, and free time activities.

Socialization

Discipline. A consistent body of literature related disciplinary styles and achievement. Dornbusch (1987) surveyed over 7000 high school students to investigate family disciplinary practices, categorized according to Baumrind's typology of disciplinary styles: authoritarian, authoritative, and permissive. The authoritative style, which incorporates more reasoning, respect, and exchange of ideas between parent and child than the authoritarian style, and more structure and limits than the permissive style, was found to be positively associated with achievement, across social class. The other two styles, authoritarian and permissive were negatively associated with grades. These results were consistent with Baumrind's findings with eight and nine year-old subjects.

Other research, which uses different terminology, also supports the findings of Dornbush. Slaughter and Epps (1987) reporte study by Clark in which families of successfully achieving black high school students were found to provide firm, but not rigid or harsh, discipline. From observations of parents and adolescents during discussion tasks, Portes (1986) found that harsher parental measures were negatively correlated to reading and language scores. Metcalf and Gaier (1987) related the parenting practices of upward-striving middle class parents to student underachievement.

Expectations and Goals. Scott-Jones (1987) found that the parents of both high-readiness and low-readiness children had high long term aspirations for their children, although the two groups had different shorter term goals. The parents of high-readiness children wanted them to be smart and had clearer short-term academic goals for them, whereas the parents of low-readiness children stressed good behavior as their goal.

Greene (1973) found that parental aspirations were significantly related to the academic achievement of secondary students. Marjoribanks (1983) found the same relationship, but only for the professional class, not the working or intermediate classes, in his sample of eleven-year-olds. In

summary, there were indications that parental aspirations might be related to achievement, at least for older students.

The literature also indicated that parents' positive attitudes toward their children's independence have a strong influence upon achievement (Marjoribanks, 1983; McGowan & Johnson, 1984).

Cultural Influences. In some of the previously cited studies, authors have noted differences between ethnic groups, in parental aspirations and practices (Brooks, 1989; Dornbusch, 1987; Portes, 1986), and how they seem to influence the children. For Asians, Dornbusch found no correlation between the authoritative and permissive styles and achievement. Hispanic males showed no correlation between authoritarian parenting and grades, whereas hispanic females did display correspondingly low grades. Fields (1981) related that the aspirations of white parents did not seem to influence their children's aspirations, as Dillard and Campbell had also found. Fields offered the explanation that the examples of ethnic status in the environment may have produced the children's expectations without parental intervention. It seems that other factors in the cultural environment of a group could likewise influence children, thereby either eliminating a need

or creating a greater gap to potentially be filled by parental influence.

Comparison of Socialization and Education. Brooks (1989) found that of the two dimensions of parent involvement she studied, socialization and teaching, socialization was the greater contributor to achievement. Ranked by achievement, the children of high-socializing, low-teaching parents were first; high-socializing, high-teaching second; low-socializing, low-teaching third; and low-socializing, high-teaching last. While the socialization items reflected modeled and discussed behaviors, the teaching items reflected parent-controlled behaviors.

Formal Parent-School Involvement.

Stevenson and Baker (1987) reported that teachers' assessments of student performance were significantly related to parents' attendance at conferences and meetings. They interpreted the students' higher achievement as being attributable to the mothers' educational status and subsequent knowledge of schooling. When similar measures of parental involvement were compared by Shakiba-Nejad (1985) to achievement tests, no significant relationship was found.

In other types of formal parent involvement: involvement

in school issues (Lee, 1984), in-class volunteer work (Land, 1983; Leler, 1983), and a parent information program, (Anderson, 1987), no relationship was found between formal parent-school involvement and student achievement.

The literature contributed important information and raised issues in parent involvement, which were addressed by the following research questions and hypotheses.

Research Questions and Hypotheses

Do parents' expectations and shorter term goals influence their choice of activities and/or their children's achievement? Based on the research about aspirations, a hypotheses was formulated that expectations would be related to achievement for older, but not younger, children. Also to explore this research question, investigations were made into relationships between expectations and goals, goals and activities, and goals and achievement.

Of the activities in which parents and their children engage, which are important to their children's achievement? For this study, activities were clustered into five areas: direct education, indirect education, social activities, management and family time. Based on the trends in the literature, it was hypothesized that indirect education would

have positive effects upon achievement. The research on disciplinary styles and achievement led to a hypothesis that emphasis on management, which might indicate an authoritarian parenting style, would be negatively related to achievement. Direct education, the other of the two directly parent-controlled activities, was not expected to be related to achievement, considering the mixed success of specific parent training programs, the fact that the sample parents had not participated in common training, and the possible relationship between direct education and supervision and the authoritarian parenting style. Socialization activities, not directly focused on academic gains, were expected to contribute more to achievement than the education activities.

How is formal parent-school involvement (as measured by parent volunteerism and parent conference attendance) related to achievement?

Are there differences between groups (age, gender, SES, and ethnic groups) in parent involvement and its effects upon achievement?

Method

Sampling Procedure

A parent involvement survey was distributed to the

population of a K-6 elementary school. The sample was limited initially to the 225 parents who chose to complete the survey. It was next limited to grades 2-6, the grades for which student achievement tests were available. The sample (N=180) included 28% of the school's grade 2-6 students and was demographically similar to the school population. The sample had a median reading score of 46%ile, and an ethnic distribution of 13% Asian, 12% Black, 19% Hispanic, 51% White, and 4% other, according to the ethnic designations in school records (hereafter referred to as Asian-American, African-American, Latino, and Anglo.) 36% of the students were bussed to the school from inner city neighborhoods with high concentrations of families on welfare; the other 64% resided in the suburban school neighborhood.

Construct Definition

Expectations. Parents were asked to predict how far their child would go in school, on a scale from beginning high school through graduation from a four-year college.

Goals. Parents were asked how important each of the following would be for their child in the next few years: (a) basic skills - arithmetic, spelling, word recognition; (b) understanding - reading comprehension, major ideas in each

subject; (c) thinking skills and problem solving; and (d) self image, confidence, motivation. The four goal variables were labeled basic skills, understanding, thinking, and affective.

Activities. Parents were asked how much of the time they spent with their children in each of the following areas: (a) school work - supervising homework, or tutoring; (b) general education - reading to child, going to libraries, museums or performances; (c) social activities - clubs, church, or sports; (d) management - discipline, supervision of chores, or managing child's schedule; and (e) family time - recreation, talking about plans or problems, or working together. The five activity variables were labeled direct education, indirect education, social, management, and family. The first two were considered education activities and the last three socialization activities.

Achievement Scores. Metropolitan Achievement Test 6 reading and mathematics total test and subtest scores were used in the analyses.

Achievement Groups. Lower achievers were defined as students who scored below the 35th percentile in either reading or math and thus eligible for Chapter 1 services. Higher achievers were those who were not eligible.

Corresponding Subtests. Subtests defined as corresponding to goal areas were: word recognition and computation, for basic skills, reading comprehension, for understanding, and problem solving, for thinking.

Results

Utilizing the data gathered from the survey, from school records of test scores, demographic information, parent participation, analyses were conducted to test research hypotheses and explore research questions. The analyses were conducted in three phases. In phase 1, relationships were analyzed among the variables for the entire sample. Next, descriptive statistics and T-tests were utilized to provide information about pertinent groups. Because some ethnic groups were both small in number and in percentage of the total group, the use of ethnic variables in correlations and multiple regressions was not appropriate. The multiple regression and residual analyses in Phase II of this study clarified the results from Phase I, by looking at shorter-term achievement gains and investigating patterns among groups of students. In Phase III, path analytic models were constructed to summarize the results of Phase II, and trace the direct and indirect influences of the major variables in a causal model.

Phase 1: Correlational Analyses and Descriptives

Expectations, Goals, and Activities

Pearson's r correlations were used to examine the relationships between the parent data variables of expectations, goals, and activities to achievement, and the relationships among the same three sets of parent data variables.

Expectations and Achievement. The results clearly indicate a relationship between expectations and achievement. Positive, significant correlations were found between expectations and all achievement tests. A stronger relationship was found for older students on several of the tests, as shown in table 1.

Insert Table 1 about here

Expectations and Goals. There was a tendency for expectations to be related to parents' higher ranking of each goal area. Significance was found between expectations and two goals, thinking ($r=.15$, $p<.05$) and affective ($r=.14$, $p<.05$). Correlations with the other two goals, basic skills ($r=12$, $p=.057$) and understanding ($r=.12$, $p=.053$), approached

significance.

Goals and Achievement. There were no significant correlations between the basic skills or thinking goals and achievement, even on designated corresponding tests. Understanding was correlated with reading comprehension ($r=.13$, $n=163$, $p<05$), a predicted corresponding area, and reading total ($r=.14$, $n=141$, $p<.05$). The affective goal was significantly related to reading total ($r=.19$, $n=163$, $p<.05$) and math total ($r=13$, $n=163$, $p<.05$).

Goals and Activities. The basic skills goal was significantly correlated with both directed activity areas, direct education and management. The goal of understanding was not significantly related to any activity. The higher level thinking goal was significantly correlated with the three socialization activity areas, but not with the education activity areas. The affective goal was significantly correlated with two socialization areas. The significant correlations are displayed in table 2.

Insert Table 2 about here

Activities and Achievement. As shown in Tables 3 and 4,

direct education and management were negatively related to several areas of achievement, especially the reading achievement of older children. In mathematics, significance was found only for the relationship between management and problem solving and mathematics total, for older children. Indirect education and social activities were not significantly related to achievement. Some negative relationships with family time were found for older children. The activity variables produced no significant relationships with achievement for younger children.

Insert Tables 3 and 4 about here

Group Differences

Expectations. Most parents had high expectations. Sixty-eight percent predicted their children would complete four more years of college. No parents predicted that their children would not complete high school. Among ethnic groups, Asians had the highest expectations, with 83% predicted to complete college of the 96% predicted to begin, African-Americans 59% of 95%, Anglos 68% of 91%, and Latinos 57% of 82%. A one-way analysis of variance was conducted to compare parent

expectations among the ethnic groups. No significant difference was found. In a t-test between the two socioeconomic groups, there was no significant difference in expectations; furthermore, the means for the two groups were very close (3.57 and 3.59). A t-Test between the gender groups revealed that expectations were significantly higher for girls.

Goals. A high percentage of parents ranked each goal area as very important: Basic Skills, 81%, Understanding, 81%, Thinking, 76%, and Affective Domain, 79%. One-way analyses of variance by ethnic groups, conducted for each goal area, revealed highly significant differences: basic skills ($F = 6.12$, $df=170$, $p<.001$), understanding ($F = 7.28$, $df=171$, $p<.001$), thinking ($F = 7.12$, $df=171$, $p<.001$) and affective ($F = 12.25$, $df=171$, $p<.001$.) Asian-American parents consistently ranked the goal areas as less important than other parents did. T-tests indicated that the differences between the Asian-American and Anglo parents' goals were significant for all four areas: basic skills ($t=2.79$, $df=26$, $p=.01$), understanding ($t=3.25$, $df=29$, $p<.01$), thinking ($t=3.73$, $df=28$, $p<.01$), and affective ($t=3.46$, $df=25$, $p<.01$). No significant differences were found between African-American and Anglo or Latino and Anglo parents' goals, although the means indicated that Anglo

parents assigned more importance to the goals than the other groups did. The one exception was Latinos parents' higher ranking of understanding.

There were differences between the two socioeconomic groups in goals. The higher SES group ranked all goals higher in importance. There were significant T-test results for basic skills ($t=2.88$, $df=97$, $p<.01$), and affective goals ($t=3.07$, $df=97$, $p<.01$), while the probability approached significance for the understanding ($t=1.96$, $df=123$, $p=.052$), and thinking ($t=1.89$, $df=118$, $p=.062$) goals.

Activities. A large percentage of the parents reported spending much time in each activity area. The largest percentages reported were for management (76%), and family time (76%), then direct education (66%), social activities outside the home (57%), and least, indirect education (46%).

Formal Parent Involvement

Conference Attendance. Most parents (82%) did attend conferences. There was a highly significant relationship (chi-square=19.52, df=2, $p<.001$) between conference attendance and achievement.

Parent Volunteers. A significant chi square (chi-quare=6.25, df=2, $p<.05$) was computed for the relationship

between volunteering and achievement. Of the 21 parents who volunteered in the classroom, the majority were parents of middle achievers. None were parents of bussed students.

Phase II: Residual and Multiple Regression Analyses

Residuals were generated from bivariate regression of all post tests upon the corresponding pretests. Because pretest scores were not available for the grade 2 students, and several other students, the sample of students for which residuals could be calculated was between 90 and 100 for all tests, except word recognition (n=77) which was not given in grades 5 and 6. Strong correlations were found between each pretest and posttest, (reading total r=.80, vocabulary r=.59, word recognition r=.73, comprehension r=.72, math total r=.77, concepts r=.61, problem solving r=.64, and computation r=.65, with $p<.001$ for all tests), indicating that much of the posttest variance was explained by pretest scores.

Correlations

The residuals served as new variables which indicated relative short-term student achievement gains during a single school year. Correlations were run between achievement and expectations, using the residuals instead of the posttest scores. Only computation (r=.27, n=93, $p<.01$) remained

significantly related to expectations. Similarly, parent conference attendance, which was related to posttest scores, was not related to any achievement gain.

Multiple Regression

Next, a multiple regression analysis was performed with each achievement residual as the dependent variable to determine the relative contribution of the ten independent variables, the goals, expectations, and activities, to short-term gains. A stepwise regression procedure was used, with pairwise deletion of missing data and minimum tolerance of .30. The same regression procedure was followed with students grouped by minority status, socioeconomic status, and gender. Unfortunately, sample size did not allow separate regression analyses for the four ethnic groups, so Asian-American, African-American, and Latino subjects were grouped together in the minority category. Age group analyses were not possible because residuals were not available for grade 2 students. All significant predictions are displayed in Table 5. No variables entered as significant predictors of math total or word recognition residuals for any group.

Insert Table 5 about here

Expectations. Expectations was a positively related predictor in each instance where it entered an equation: computation for all students, minority, and lower SES students; and comprehension for lower SES and female students.

Goals. Parents' goals did emerge as strong predictors of achievement gains, especially in the analyses of female, minority and lower SES students' data. Goals which emerged as positive predictors in corresponding subtest areas were: understanding for the comprehension subtest for minority and female students and basic skills for the computation subtest for Anglo students. In no case was a goal corresponding to a subtest a negative predictor in that area. Furthermore, in each case where a goal entered as a predictor of a non-corresponding subtest, the direction of its prediction was negative.

Activities. In each case where an activity entered as significant predictor, it was negatively related to achievement gains. Direct education was a negative predictor of gains in reading comprehension and reading total for the total group,

and to a greater extent for Anglo students and females. Management served as a negative predictor of vocabulary for the total group and problem solving for girls. Also, family time was negatively related to comprehension for the lower SES group.

Phase III: Path Analyses

To summarize the findings and allow consideration of indirect effects, a general path model was proposed, linking expectations, goals, activities, and achievement gains, in that sequence. (See Figure 1.)

Insert Figure 1 about here

The path analyses proceeded from the multiple regression analyses summarized in Table 5, but were concentrated on areas of achievement corresponding to the goals of basic skills, understanding, and thinking. Therefore, the residuals of math computation (There were no significant results for word recognition.), reading comprehension, and math problem solving tests were the final predicted variables. Paths, which did not reveal any indirect effects, and thus for which path analysis would have yielded no visual information beyond a

representation of a regression in Table 5, were not displayed in the figures in this section. On that basis, diagrams were not included for: Anglo students in computation, the total group and lower SES students in comprehension, and girls in problem solving.

Math Computation

Identical sets of relationships remained in the path model for the lower SES, minority, and total group of students. Expectations was positively related to both computation and thinking. Indirect effects of expectations upon computation, through the parents' concern with the importance of thinking, were negative, and counteracted some of the direct effects.

Insert Figure 2 about here

Figure 2 represents the relationships for the three groups; however, only the path coefficients for the lower SES group are displayed in the diagram. The coefficients for the other two groups are included in Table 6. As indicated in Table 7, the direct and indirect effects of the model explain nearly all of the covariation between expectations and computation for each group.

Insert Tables 6 and 7 about here

Reading Comprehension

The resultant path diagrams for reading comprehension were more diverse and complex. For Anglo students, as shown in figure 3, both expectations and the affective goal were negatively related to direct education. The two chains of negative relationships translated into positive indirect effects upon reading comprehension.

Insert Figure 3 about here

For minority students, the path model is similar to the one developed for math computation, with the exception that the goal of understanding contributes directly to comprehension gain.

Insert Figure 4 about here

To produce this model, the stepwise regression entry criteria, normally set at $p \leq .05$, was adjusted to $p \leq .08$, for

the following reason. When in the initial analysis, non-causal effects of .28 were produced, and thus the model did not account for the original covariance, it was noted that expectations had been close to entering the equation. Allowing its entry produced a better model, as indicated by the .03 non-causal figure in Table 8.

The model for girls' reading comprehension gains is the most complex of any of the models. As shown in Figure 5, all three curricular goals, expectations, and the direct education activity remained in the model. Indirect effects upon comprehension gain, both positive and negative, totaled -.24, and further illustrated the interplay between apparently conflicting factors.

Insert Figure 5 about here

Table 8 summarizes the decomposition of bivariate covariation related to Figures 3, 4, and 5.

Insert Table 8 about here

Discussion

Substantial and meaningful differences in achievement were found to be significantly related to parental expectations, goals, activities, and school involvement. Taken in perspective, among many potential school and societal influences upon student achievement, the parental contribution is impressive.

Expectations

Parent expectations were high and significantly related to all areas of achievement, as measured by posttest scores. Even in the residual analyses, where fewer significant relationships were found, all direct relationships between expectations and achievement gains were positive.

The posttest correlations might be interpreted either as indicating that expectations influence achievement, or that achievement influences expectations. The greater strength and significance of the relationships for older students could reflect the older children's understanding and responding to their parents expectations, or it could reflect the parents' adjustment of expectations according to their knowledge of their children's achievement. The finding of fewer significant relationships between expectations and short-term gains could

be an indication of expectations having been influenced by achievement, or it might be explained by expectations being long-term goals and being more visible in their cumulative effect on achievement. I favor interpreting expectations as an influence upon achievement, but neither the potential importance of expectations nor their potential to be modified should be ignored. Some parents may be responding to negative feedback from the school and lowering their expectations.

As educators we should help parents to maintain and raise, not lower, expectations. Parents could benefit from personal feedback about their children's strengths, accomplishments, and potential. Test scores and grades, especially without explanation, may lower expectations. Some parents need information about college accessibility and procedures, in order to even consider college as a possibility. Specific ethnic groups, such as Latinos, could benefit from information about colleges attended by others in their group, and their successful experiences.

High expectations are maintained by some parents of lower achievers, as illustrated by the following comment from a parent at the sample school. "I know she'll make it. My brother had trouble learning to read, and he went on to get a

degree. I just don't want her to get discouraged or embarrassed while she's having trouble. I'd like to know what I can do to help her". Further investigations using longitudinal data might reveal whether when high expectations are maintained, achievement changes with time to match expectations.

Goals

Parents' goals were found to be directly and consistently related to achievement. The path model had the potential to reveal chains of relationships linking goals to activities to achievement. Although goals were related to activities, the activities did not usually appear in the achievement gain regression equations, so there were few such chains. Much more often, goals were directly related to achievement.

The consistent pattern of relationships between parents' goals and students' gain was very interesting, and had not been anticipated. Although the goals were not intended to be mutually exclusive, (Parents could rank each of them as very important.), the goals were substantially different, and potentially conflicting. The differences were reflected in students' improvement in corresponding areas and lack of progress in non-corresponding or conflicting areas.

The effects of goals were most visible in the achievement of minority, lower SES and female students. These findings seem to indicate that girls, and at-risk students are more sensitive to their parents' goals.

Cultural differences were apparent in the data. Rather than cultural differences among goals, a general bias became apparent as the data revealed that Anglo parents ranked all of the goals as more important. Curricular goals, however broad, are apparently linked to the majority culture. Asian-American parents, who did not regard specific goals as extremely important, had very high overall expectations for continued education. They may see another route to achievement for their children, one that is not reliant on specific curriculum.

Activities

Parent-controlled activities were negatively related to achievement and achievement gains. The major implication is that many parents' well-intended extra efforts to teach and manage their children may be counterproductive. The majority of the parents reported spending much or most of the time they spend with their children, on management and direct education, about as much time as they spent as family time. An area not addressed by this study is how much free time the students have

outside of school and how it is spent. Between school, bus transportation, and home, many of these students may be spending virtually all of their time in activities structured by adults.

As educators we need to consider what we ask parents to do, whether directly or implicitly, through homework. The majority of parents who entered an optional comment on their questionnaire stated that the most important thing they could do for their children was to listen and understand. Yet some of the same people spent most of the time they had with their child on schoolwork.

The literature indicates that socialization aspects of child rearing may be more important than educational efforts, even in producing higher achievement, and that indirect education leads to higher reading achievement. The anticipated positive relationships between such activities and achievement were not supported by this research. Since the survey items used for the activity constructs grouped much potential information together, it is not possible to answer questions about specific practices, including disciplinary styles from this data. More specific items would enhance in-depth research in further studies on this topic.

Formal Parent Involvement

Parent volunteers. The literature indicated relationships between educational status and parent involvement, and between educational status and achievement. The higher status mother's experience with schooling may allow her to be more comfortable volunteering in a school setting and more confident of her ability to contribute. Also, her experience may enable her to encourage or assist her child to achieve. Educational status, although not measured or included in this research design, may have acted as a spurious factor contributing to volunteerism as well as achievement. An additional factor of importance for this sample is that most of the lower SES parents do not live in the neighborhood. Not only might these parents have lower educational status, but many also lack transportation. None of the parent volunteers are from the non-resident group, and since fewer higher achievers come from the non-resident group, this factor further explains the relationship between volunteerism and achievement.

Volunteers contribute to classroom and school programs as a whole, and their work is highly valued in that regard. The effects upon instruction would not necessarily be expected to appear in their own children's relative scores. There is

potential that their experience at school with curriculum and instruction may enable them to assist their own children, although that was not indicated in the achievement gains of volunteers' children in this study.

Conference Attendance. Parent conference attendance was also significantly related to achievement. The predicted result was consistent with faculty opinion at the sample school site, although it was not well supported by the literature.

Several factors may have contributed to this relationship. First, the educational status explanation offered for the lack of volunteerism among the parents of low achievers could also apply to this aspect of formal parent involvement. Second, transportation remains a problem. Although many non-resident families did attend, one family journeyed for two hours by public transportation to attend their conference. Some families have children bussed to two or more schools in the district. Third, parents' prior knowledge of children's achievement might influence their motivation to attend conferences, with anticipated negative feedback deterring attendance and anticipated positive feedback increasing its likelihood.

Although conferences are provided so that parents can

follow up at home to improve their children's performance, and conferences seem to have much potential to influence achievement, conference attendance was not related to achievement gains, or to parent-child activities.

In contrast to other parent formal involvement activities, a conference can provide the opportunity for parents and teacher to focus on the individual child. It can be both an opportunity for the parent to learn about the child's accomplishments, and a unique opportunity for teacher to learn about the child, her interests, her family, and her parents' concerns, goals, and expectations.

Parent involvement is called for in much of the current commentary on educational reform. We know that parents contribute to their children's learning. Yet we do not know that most formal-parent school involvement activities, or prescribed helping at home, would be beneficial. Parents do have a greater role than to provide "follow-up" to the school agenda. We need to regard with respect their efforts and hopes and to encourage them as well.

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Table 1

Expectations and Achievement- Correlations

	All Students	Grade 2-3	Grade 4-6
Reading Total	.26***	.25*	.28**
	(158)	(80)	(81)
Vocabulary	.17*	.19@	.14*
	(136)	(72)	(64)
Word Recognition	.17*	.17@	.19
	(117)	(72)	(45)
Comprehension	.26***	.22*	.31**
	(137)	(72)	(65)
Math Total	.32***	.25*	.40***
	(158)	(80)	(78)
Concepts	.24**	.26*	.22*
	(136)	(72)	(64)
Problem Solving	.15*	.08	.25*
	(135)	(71)	(64)
Computation	.37***	.27*	.49***
	(134)	(71)	(63)

@p<.10 *p<.05 **p<.01 ***p<.001

Table 2

Parent Goals and Activities - Significant Correlations

	Activities				
Goal	**Direct Ed**	**Indirect**	**Social**	**Management**	**Family**
Basic Skills	.15*			.18**	
	(178)			(178)	
Thinking			.17*	.24**	.16*
			(180)	(179)	(178)
Affective				.18**	.15*
				(179)	(178)

*p<.05 **p<.01

Table 3

Activities and Reading Achievement - Significant Correlations

Activity/Group	Reading Total	Vocabulary	Comprehension
Direct Education			
All Students	-.15*	-.14@	-.15*
	(162)	(140)	(141)
Grades 4-6	-.24*	-.21*	-.19@
	(81)	(66)	(67)
Management			
All Students	-.14*	-.11@	-.18*
	(162)	(139)	(140)
Grades 4-6	-.15@	-.23*	-.22*
	(81)	(66)	(67)
Family Time			
All Students			-.12@
			(140)
Grades 4-6		-.29**	-.23*
		(66)	(67)

@p<.10 *p<.05 **p<.01 ***p<.001

Table 4

Activities and Math Achievement - Significant Correlations

Activity/Group	Math Total	Concepts	Prob Solve	Computation
Management				
All Students	-.19**	-.16*	-.18*	-.11@
	(162)	(139)	(138)	(137)
Grade 2-3	-.17@	-.16@	-.15@	
	(81)	(73)	(72)	
Grade 4-6	-.21*		-.21*	
	(81)		(66)	

@p<.10 *p<.05 **p<.01 ***p<.001

Table 5

Prediction of Achievement Residuals by Expectations, Goals, & Activities

Group / Test	Predictor	Beta			
All Students					
Reading Total	Direct Ed	-.25*	R .25	Adj R^2 .05	F 5.87*
			R^2 .06	N 88	
Vocabulary	Management	-.24*	R .24	Adj R^2 .05	F 5.28*
			R^2 .06	N 90	
Comprehension	Direct Ed	-.24*	R .24	Adj R^2 .05	F 5.47*
			R^2 .06	N 91	
Computation	Expectations	.32**	R .34	Adj R^2 .10	F 5.95**
	Thinking	-.21*	R^2 .12	N 92	
Minority					
Reading Total	Thinking	-.36*	R .36	Adj R^2 .10	F 5.53*
			R^2 .13	N 39	
Comprehension	Thinking	-.48**	R .47	Adj R^2 .18	F 5.41**
	Understanding	.33*	R^2 .22	N 41	
Computation	Expectations	.49***	R .58	Adj R^2 .30	F 10.2***
	Thinking	-.43**	R^2 .33	N 43	

Table 5 (Continued)

Group / Test	Predictor	Beta			
White					
Reading Total	Direct Ed	-.34*	R .34	Adj R^2 .10	F 6.11*
			R^2 .12	N 47	
Comprehension	Direct Ed	-.38**	R .38	Adj R^2 .13	F 8.05**
			R^2 .15	N 48	
Computation	Basic Skills	.36*	R .36	Adj R^2 .11	F 7.02*
			R^2 .13	N 47	
Lower SES					
Reading Total	Basic Skills	-.54**	R .54	Adj R^2 .27	F 13.04**
			R^2 .30	N 32	
Vocabulary	Understanding	-.41*	R .41	Adj R^2 .14	F 6.70*
			R^2 .17	N 34	
Comprehension	Basic Skills	-.59***	R .76	Adj R^2 .54	F14.13***
	Expectations	.44***	R^2 .58	N 34	
	Family Time	-.36**			

Table 5 (Continued)

Group / Test	Predictor	Beta			
Computation	Expectations	.55***	R .61	Adj R^2 .34	F10.13***
	Thinking	-.47**	R^2 .37	N 36	
Middle SES					
Math Concepts	Affective	-.32*	R .32	Adj R^2 .09	F 6.19*
			R^2 .10	N 35	
Girls					
Reading Total	Thinking	-.64***	R .72	Adj R^2 .49	F13.92***
	Direct Ed	-.48***	R^2 .52	N 41	
	Understanding	.32*			
Vocabulary	Thinking	-.33*	R .33	Adj R^2 .08	F 4.88*
			R^2 .11	N 42	
Comprehension	Thinking	-.82***	R .80	Adj R^2 .61	F17.65***
	Expectations	.39***	R^2 .64	N 43	
	Direct Ed	-.37***			
	Understanding	.38**			
Problem Solving	Management	-.34*	R .34	Adj R^2 .09	F 5.13*
			R^2 .11	N 41	

*p<.05 **p<.01 ***p<.001

Table 6

Path Coefficients of Math Computation Paths, Shown in Figure 1, by Group

	Lower SES	Minority	Total Group
Expectations to Computation	.55	.49	.32
Expectations to Thinking	.29	.22	.22
Thinking to Computation	-.47	-.43	-.21
Error Term	.79	.82	.94

Table 7

Decomposition of Bivariate Covariation of Math Computation Paths by Group for Relationship between Expectations and Computation

	Lower SES	Minority	Total Group
Covariation	.41	.40	.27
Causal Direct	.55	.49	.32
Causal Indirect	-.17	-.09	-.05
Total Causal	.38	.40	.27
Non-Causal	.03	0	0

Table 8

Decomposition of Bivariate Covariation of Reading Comprehension Paths by Group

	Minority	White		Female
Relationship	**Expectations/ Comprehension**	**Expectations/ Comprehension**	**Affective/ Comprehension**	**Expectations/ Comprehension**
Covariation	.17	-.03	.09	.20
Causal Direct	.26	0	0	.39
Causal Indirect	-.12	.10	.08	-.24
Total Causal	.14	.10	.08	.15
Non-Causal	.03	-.13	.01	.05

Figure 1 General Path Model Relating Expectations, Goals, Activities and Achievement Gain

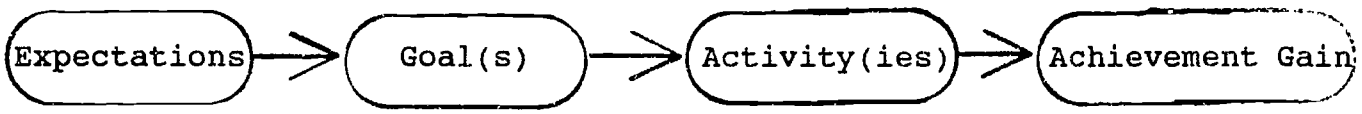


Figure 2 **Path Model for Math Computation Gains for Three Groups: Lower SES (Data Shown), Minority, and Girls**

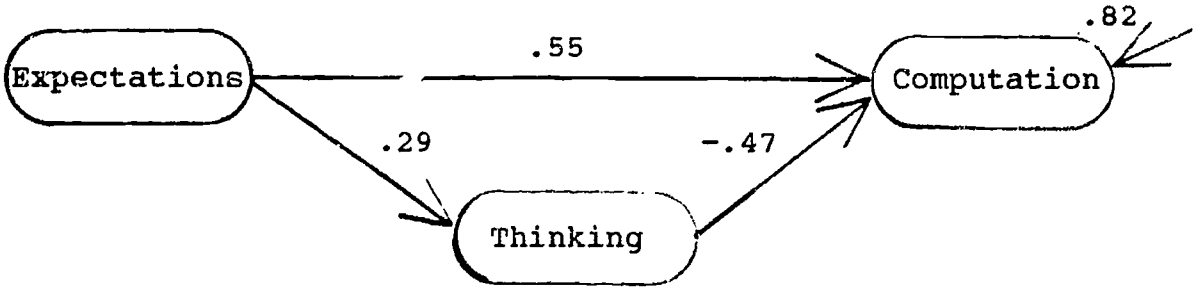


Figure 3 Path Model for Reading Comprehension Gains for Anglo Students

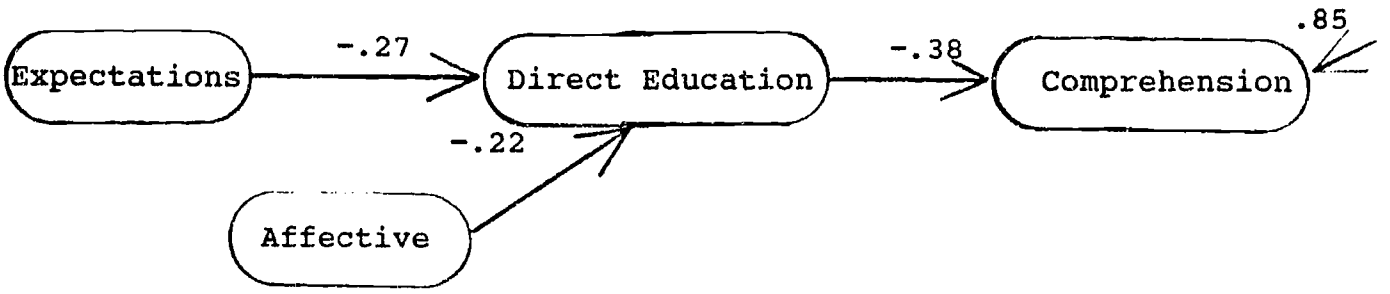


Figure 4 Path Model for Reading Comprehension Gains for Minority Students (Includes Asian-American, African American, Latino, and others)

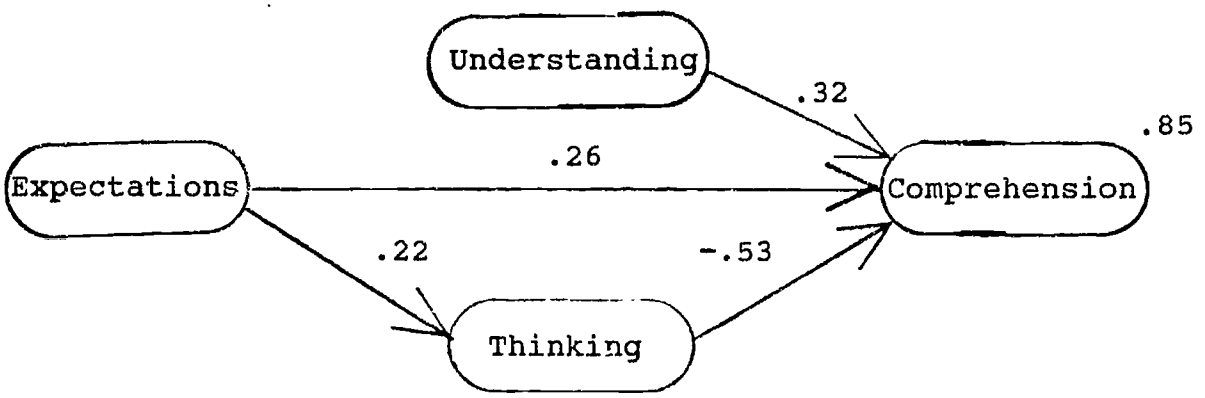
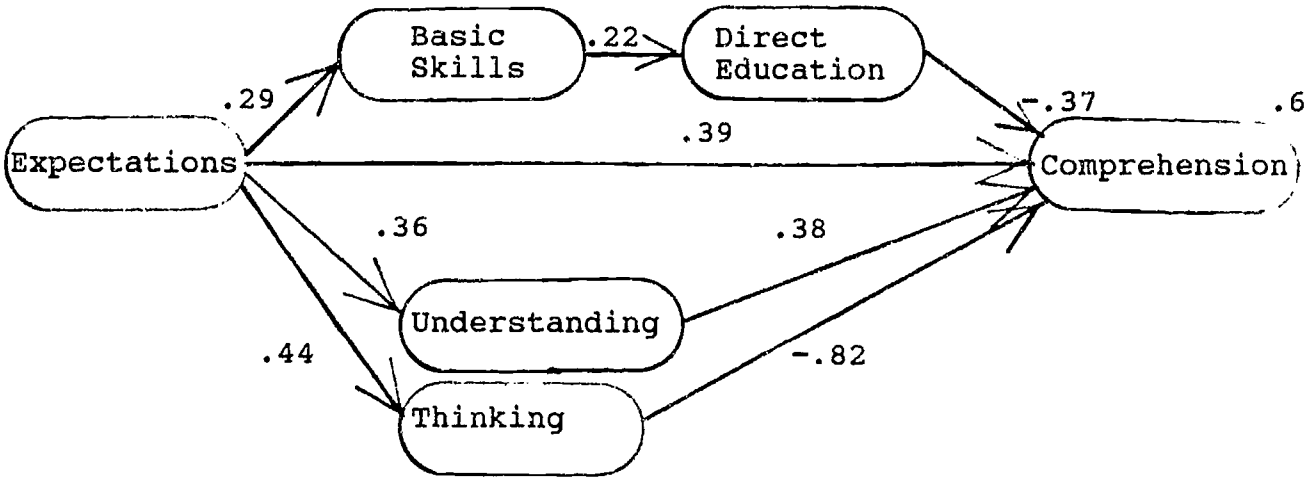


Figure 5 Path Model for Reading Comprehension Gains for Girls



Please mark with a check ( ) to give your answers below. Your are welcome to, but do not need to, write additional information.

How helpful have the following been in giving you ideas about working with your child?

Your child's teachers

__not helpful __somewhat helpful __ helpful __very helpful

Other staff(Counselor, Specialist, Community Worker)

__not helpful __somewhat helpful __ helpful __very helpful

Newsletter

__not helpful __somewhat helpful __ helpful __very helpful

Parent Meetings

__not helpful __somewhat helpful __ helpful __very helpful

How far do you predict your child will go in school?

__not complete high school __complete high school __begin college

__graduate from 4-yr. college, or more

To prepare your child for the future, how important is growth in each area in the next few years?

Basic Skills - arithmetic, spelling, word recognition, etc.

__not important __somewhat important __important __extremely important

Understanding - Reading comprehension, major ideas in each subject

__not important __somewhat important __important __extremely important

Thinking skills and problem solving

__not important __somewhat important __important __extremely important

Self image, confidence, motivation

__not important __somewhat important __important __extremely important

Other very important areas:

How much of the time you spend with your child is spent in each of the following areas?

School work - supervising homework, or tutoring

__none of the time __some of the time __much of the time __most of the time

General education - reading to child, going to libraries, museums, or performances

__none of the time __some of the time __much of the time __most of the time

Social Activities - clubs, events, church, or sports

__none of the time __some of the time __much of the time __most of the time

Management - discipline, supervision of chores, or managing child's schedule

__none of the time __some of the time __much of the time __most of the time

Family time - recreation, talking about plans or problems, or working together

__none of the time __some of the time __much of the time __most of the time

What do you do that you feel contributes most to your child's learning?

In what areas would you like more information?

__helping children with school subjects List subjects:

__Parenting practices Areas of interest:

__Community services and activities I would like to know more about:

__School programs and activities I would like to know more about:

__Adult education - reading, writing, math, or English as a second language

How helpful to you do you think the following ways of presenting information could be?

Parent conference with teacher or specialist teacher

__not helpful __somewhat helpful __ helpful __very helpful

Written information

__not helpful __somewhat helpful __ helpful __very helpful

Parent workshop - information presented by school staff or quest speaker

__not helpful __somewhat helpful __ helpful __very helpful

Parent and child workshop

__not helpful __somewhat helpful __ helpful __very helpful

Group discussion with other parents

__not helpful __somewhat helpful __ helpful __very helpful

Other ideas or comments:_____

What is the relationship of the person who filled out this survey to the child?_____

How many children are there in the home?_____